these agents, *but also after they have been stopped for some little time* (a source of serious danger), it is necessary for the person who has charge of the administration of the drug to be on the lookout for symptoms of this occurrence, both during the time the agent is being given, and for some time after the patient has recovered from its more evident effects.

3. The danger of death, from stoppage of the respiratory functions, must be borne in mind in every case in which anæsthetics are given; but, of perhaps greater importance is the danger from interference with the proper action of the heart—particularly when it is remembered that, by artificial means, we can combat the former contingency. It might even be advisable, in certain cases, to introduce a tracheal-tube by the mouth—so as to enable us to force air into the lungs by means similar to those adopted in experiments with animals; or, in circumstances where such a procedure was impracticable, tracheotomy might be performed, with the same object in view. Artificial respiration should be continued, even though all evidence of cardiac action has ceased.

4. As regards comparative danger, the three anæsthetics may be arranged in the following order: chloroform, ethidene, ether; and the ease with which the vital functions can be restored may be conversely stated, thus: the circulation is more easily re-established when its cessation is due to ether than to ethidene; and when the result of ethidene, than when chloroform has been used. The advantages which chloroform possesses over ether—in being more agreeable to the patient and more rapid in its action, in the complete insensibility produced by it, and the absence of excitement or movements during the operation—are more than counterbalanced by its additional dangers.

5. The chief dangers are: (1) sudden stoppage of the heart; (2) reduction of the blood-pressure; (3) alteration of the pulse-respiration ratio; and (4) sudden cessation of the respiration. The danger with ether approaches from the pulmonary rather than from the cardiac side—so that, by establishing artificial respiration, we have a means of warding off death. Its disadvantages are, to a great extent, obviated by the use of ethidene; whilst the dangers of chloroform are also reduced to a minimum.

Effect of Chloral-hydrate on Certain Forms of Artificial Diabetes.

ECKHARD (*Arch. für Exper. Pathol.*, Band xii.) confirms the statement of Mering and Musculus, that the urine of chloralized animals does not contain any sugar. In order to see whether the diabetic puncture was effectual in chloralized rabbits, the author subcutaneously injected into the animals a gramme (on the average) of chloral-hydrate, and very frequently, after two or three hours, another dose of a quarter of a gramme. The narcosis after this was deep, and lasted five or six hours. The urine passed three or four hours after the puncture was collected, evaporated, and the fermentation-test was applied to the watery extract of the residue, always with a negative result. Even after severe injury of the vermiform process, diabetes was absent in chloralized rabbits, and in the majority of the experiments no noteworthy increase of the urine occurred. In two converse experiments, the author noticed the following results. After the vermiform process had been divided in the healthy rabbit, the urine showed itself strongly impregnated with sugar in the course of one hour. If the author injected subcutaneously one gramme of chloral-hydrate, the urine of the next hour still contained sugar, but not that of the second, third, and fourth hours. In a third series of experiments, the author endeavoured to decide whether the chloral-narcosis does also not prevent the diabetes caused by reflex action. For this purpose the author irritated, in rabbits, one of whose vagus nerves on the neck had been cut, the central end of the same at intervals of from three to five minutes, each time for two minutes; in a normal animal, diabetes occurred after one hour's irritation; in chloralized animals, however, the urine did not contain any sugar, even after irritation, for several hours. In a dog, however, the urine of which was free from sugar after five grammes of chloral-hydrate, the inhalation of carbonic oxide produced distinct diabetes. In one patient with diabetes, the quantity of sugar in the urine decreased considerably after the use of chloral, whilst in another patient there was only a considerable diminution in the quantity of urine.

MEDICINE.

Pilocarpin in Diphtheria.

Dr. GEORGE GUTTMAN, of Cronstadt, writes, in the *Berl. Klin. Woch.*: Knowledge of the physiological action of pilocarpin and of its effects upon bronchial catarrh, giving rise to moist *râles*, led me to believe that, administered in diphtheria, it might loosen the diphtheritic membrane through the induced abundant salivary secretion, while it would not excite any inflammatory condition. The result of the proposed treatment was, above all expectation, brilliant and striking. In April, 1879, an entire family of seven fell sick, one after another, with diphtheria; three exhibited the severest typhoid symptoms. The second case I treated with pilocarpin in moderate doses. The next day I found a copious salivation, and fragments of pseudo-membrane floated in the expectorated matters. Pilocarpin was administered also to the other five patients. In addition, the usual general treatment was followed; quinine, tannin locally, gargles of lime-water and pepsin. The patients recovered in from two to four days. Since these first cases, down to August 1880, sixty-six cases of diphtheria (*rachenbräune*) have come under my care; fifteen exhibited the worst of the diphtheritic symptoms, of which, according to my previous experience, at least two-thirds would have certainly died; thirty-three would be termed bad cases, the membrane being extensive, the remainder were slightly affected. I gave pilocarpin to all; only in the first cases, quinine and gargles also; they recovered, as a rule, in periods of time varying from twenty-four hours to three days; of the fifteen worst cases, two recovered in nine and eleven days, the rest in two to five days. All patients who came early under treatment, while the pseudo-membrane was still loosely adherent, without exception were cured within twenty-four hours. The doubt that these cases were not truly diphtheritic is not to be raised, since they were examined with the utmost care, and in the worst cases the contagion could be distinctly traced. Under the action of the pilocarpin, not only were the membrane and infiltration dissolved in the salivary flow, but also the violent inflammatory condition yielded to its influence, the deeply reddened, dry, mucous membrane soon became moist, pale red, and in every respect of normal appearance. Led by these results, I prescribed pilocarpin in violent pharyngeal cases, angina aphthosa and tonsillaris, always with most happy results, the disease yielding in a short time. In two cases of violent tonsillitis, in which the tonsils were so swollen that water could be taken only with great difficulty, and scarification was positively indicated, not only did the swelling disappear, but the entire group of inflammatory symptoms, the one in twenty-four hours and the other in thirty-six. In the few cases of membranous croup that have fallen into my hands during the past fifteen months, pilocarpin has proved a faithful ally, and I believe it will prove as effective as in diphtheria of the fauces. Two cases of laryngitis stridula yielded promptly to the same drug, which is safer and more